DOCUMENT RESUME

ED 395 074 UD 030 906

AUTHOR Kawakami, Alice J.; And Others
TITLE A Study of Risk Factors among High School Students in Chuuk State.
INSTITUTION Pacific Region Educational Lab., Honolulu, HI.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
REPORT NO R1SFA000101
PUB DATE Oct 95
CONTRACT RP91002009
NOTE 28p.; For related documents, see UD 030 903-907.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; Administrators; *Attendance; Behavior Patterns; Class Size; Family Environment; High Risk Students; High Schools; *High School Students; Language Proficiency; Predictor Variables; *Risk; *Secondary School Teachers; *Student Attitudes
IDENTIFIERS *Federated States of Micronesia

ABSTRACT

Variables related to the status of students at risk of failure in public high schools in Chuuk State of the Federated States of Micronesia are profiled. This study was part of a larger study of at-risk status in American-affiliated political entities in the Pacific. In Chuuk, data were collected from 48 student records and interviews with 50 students, 48 families, 2 principals, 47 teachers, and 13 community leaders. Because of the small sample size, many variables expected to play a role in at-risk status could not be analyzed by statistical methods. However, variables that appeared to be related to at-risk status based on response frequencies are discussed, including: (1) absenteeism; (2) school attitude and behavioral problems; (3) divorce; (4) the quality of the student's relationship with the family; and (5) class size. Both academic and personal aspects of schooling were found to be related to the at-risk status of high school students in Chuuk. Collaborative efforts by schools, parents, and communities are recommended, and include working together to demonstrate the benefits of strong study habits and school learning; to address the absenteeism problem; to provide counseling services to students and families; to improve record keeping systems; to improve the quality of instruction; and to increase parent involvement. (Contains 18 tables.) (SLD)

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A Study of Risk Factors Among High School Students in Chuuk State

Research and Development Cadre

Alice J. Kawakami, Ph.D.
Team Leader

PACIFIC REGION EDUCATIONAL LABORATORY
828 Fort Street Mall, Suite 500
Honolulu, Hawai'i 96813-4321

October 1995

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This publication was produced with funds from the Office of Educational Research and Improvement (OERI), U.S. Department of Education, under contract number RP91002009. The content does not necessarily reflect the views of OERI, the Department, or any other agency of the U.S. Government.

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Acknowledgments

This study could not have been completed without the support of the Pacific entities' Departments of Education, the Research and Development (R&D) Cadre members and their local R&D Support Groups. As a cost-shared activity, in-kind contributions of time and resources increased already long work weeks and strained small education budgets. Pacific Region Educational Laboratory (PREL) staff who worked on this study, Alice Kawakami, Ormond Hammond, Rodrigo Mauricio, Maia Chang Rosen, Kyaw Soe, and Jian-Feng Dong are particularly grateful to R&D Cadre members for their commitment to the work, and for the continuing support of the region's chief state school officers and the respective chiefs of the four R&D Cadre members representing post-secondary institutions, private schools, and the FSM National Government.

PREL R&D Cadre Members, January 1993 - November 1995

Dr. Faauma Seui	American Samoa	Ike Santos	Guam
Mekiafa Vaifanua	American Samoa	Tom Pangilinan	Hawai'i
Rioichy Johnny	Chuuk	Carl Takeshita	Hawai'i
Eric Marar	Chuuk	Winton Clarence	Kosrae
Mariano Marcus	Chuuk	Kalwin Kephas	Kosrae
Marcus Samo	Chuuk	John William	Kosrae
Manny Borja	CNMI	Marilyn Kabua	Marshall Islands
Roy Fua	CNMI	Marcelina Ngiramolau	Palau
Jean Olopai	CNMI	Edwel Ongrung	Palau
Jacqueline Quitugua	CNMI	Masaharu Tmodrang	Palau
Burnis Dannis	FSM	Joseph Felix	Pohnpei
Susan Moses	FSM	Callistus Legdesog	Yap
Fr. Donald R Doherty	Guam	Lazarus Tauwl	Yap
Dr. Zenaida Napa-Natividad	Guam		

Chuuk Local R&D Support Group Members, January 1993 - November 1995

Ms. Margarita Cholymay	Mr. Tongei Jain
Mr. Peter James	Mr. Panser Lippwe
Mr. Daro Malon	Mr. Sanfio Sony
Mr. Singeichy Herman	Mr. Mensior Ponun
Mr. Peter James	Ms. Ermine Waliby
Ms. Jacinta Felix	Mr. Wie Uehara
Ms. Lydia Emwalu	Mr. Fierten Rain
Mr. Miasiro Albert	Mr. Peter Sisra

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Executive Summary

Purposes of the Study

Purposes of the study are to:

- Provide a profile of variables related to the status of students at risk of failure in public high schools in Chuuk State of the Federated States of Micronesia.
- Provide opportunities for collaborative research among the entities' departments of education.

Methodology

Representatives from each of the 10 American-affiliated Pacific entities planned and conducted the study. Data were collected from public high schools in the 10 entities served by PREL: American Samoa, Federated States of Micronesia (Chuuk, Kosrae, Pohnpei, and Yap), Guam, Hawai'i, Republic of the Marshall Islands, Commonwealth of the Northern Mariana Islands, and Republic of Palau. Data were collected during the Spring semester of the 1993-94 school year. This report presents a subset of the regional study, specifically Chuuk State.

The following definition of at-risk students was utilized in this study:

> "An at-risk student is one who is in danger of failing to complete his or her education with adequate academic skills, knowledge, and attitudes to function as a responsible citizen of his or her community."

Students who failed one or more courses in the fall semester of the 1993-94 school year and were in grades 9-12 of a public high school in the Pacific region were identified as at risk and selected for the study.

Results in Chuuk

Because of the small sample size in Chuuk, many of the variables could not be analyzed through statistical methods. However, variables that appear to be related to students' at-risk status based on response frequencies are discussed in the report. Among these variables were absenteeism, school attitude and behavioral problems, divorce, the quality of the students' relationship with his/her family, and class size. In general, both academic and personal aspects of schooling were found to be related to the at-risk status of high school students in Chuuk.

Conclusions/Recommendations

To address critical issues of high school students at risk in Chuuk, schools, parents, and communities must work together to demonstrate the benefits of strong study habits and school learning. They must collaborate to address the absenteeism problem, provide a variety of counseling services to students and their families, improve school record keeping systems, improve quality of instruction through staff development and availability of instructional materials, and increase parent involvement in the educational process.

I. Introduction

An increased concern for at-risk youth is evident throughout the Pacific region. The Pacific Region Educational Laboratory (PREL) Study of Risk Factors among High School Students in the Pacific region, with entity-level studies in Chuuk and Kosrae States, American Samoa, and Commonwealth of the Northern Mariana Islands (CNMI), is designed to identify the factors that affect at-risk high school students in the Pacific, promote an awareness and understanding of these students, and offer approaches to improving their education.

PREL serves 10 Pacific region entities—American Samoa; Commonwealth of the Northern Mariana Islands; the Federated States of Micronesia comprised of the states of Chuuk, Kosrae, Pohnpei, and Yap; Guam; Hawai'i; the Republic of the Marshall Islands; and the Republic of Palau. These entities are diverse in their student population in terms of demographic variables including ethnicity, language, migration, and gender. The school systems serving these students vary in their abilities to accommodate all of the high school age population, maintain accurate student records, provide certified teachers, provide extensive course offerings, and promote opportunities for community and parent involvement. The composition of homes and families ranges from extended families to single parent households. Community expectations of appropriate roles for students, teachers, and parents vary with cultural contexts.

The Federated States of Micronesia (FSM) consist of four states: Chuuk, Kosrae, Pohnpei, and Yap. The entities were formerly part of the Trust Territory of the Pacific Islands. The FSM is now an independent nation that has a "compact of free association" with the United States. It receives financial benefits in return for exclusive free passage of U.S. military vessels. The FSM compact will be up for renewal in the year 2001. Few statistics are available about the general population because the FSM is not included in census data. Chuuk State comprises the volcanic island in the Chuuk Lagoon and some 24 outer-island atolls—in all over 290 islands. Its economy is derived from fishing, agriculture, and a small tourist trade. Chuuk, the most populous of the FSM states, has approximately 50,514 people (est. 1995). There are 98 public schools, a total of 17,650 students, and 1,177 teachers in an area of 44.8 square miles. (1994).

Because the region is so diverse, a simple study of a limited number of variables was deemed impractical. Therefore, an extensive study of variables related to student success and failure specific to the public high schools of the U.S. affiliated Pacific region was undertaken.

The study places a strong emphasis on looking at the child from a holistic point of view. The researchers are well aware that an individual's success, especially in the Pacific region, is not measured by academic success alone, but also involves the many facets of personal development directly and indirectly related to the influence of formal and informal education, the surrounding environment and the milieu of the time. Therefore, it should be pointed out that, although a definition of a student at risk is provided for research purposes, this is not to be taken as a definition of a student at risk in all aspects of life. Nevertheless, because formal education is valued in the Pacific region, this definition of at-riskness surely plays a part in the experience of success or failure by the youths in the region. Keeping this in mind, this study was undertaken to identify factors comprising the profile of a child who needs extra help and attention from parents, educators, and administrators to reach his or her fullest potential as a contributing member of society.

The study was conducted over a period of three years by the PREL Research & Development (R&D) Cadre, which is composed of one representative from each of the 10 entities' departments of education, two representatives of postsecondary institutions in the region, one private school representative, and a representative from the national government of the

Federated States of Micronesia (FSM). Local support was provided during data collection by the local R & D support group, numerous school counselors, central office staff, principals, teachers and educational administrators.

This report provides a review of the literature, research questions, describes the methods used in conducting the study, presents the framework for analysis and results for Chuuk State, and discusses recommendations. Suggested uses of the report, ideas for further research, references, and appendices of the instruments used in the study are included in the regional report. The regional report is available from the Pacific Region Educational Laboratory, 828 Fort Street Mall, Suite 500, Honolulu, Hawai'i, 96813.

II. Review of the Literature

The R&D Cadre reviewed the literature to: (1) define at-riskness, and (2) identify in other studies variables that are related to students' at-risk status.

As elsewhere, some students in the Pacific region are not experiencing success in school. The National Goals for Education (1990) say, in part, "Educators must be given greater flexibility to devise challenging and inspiring strategies to serve the needs of a diverse body of students. This is especially important for students who are at risk of academic failure—for the failure of these students will become the failure of our nation." This goal is consistent with the belief that schools can make a difference. The need for new strategies is also consistent with the primary reasons cited by dropouts in 1992 for leaving school: not liking school, failing school, and feeling unable to keep up with schoolwork (Gronlund, 1993).

Definition of At-Risk Students

In conducting the review of the research, the first step was to develop an understanding of the term "at-risk students." The term "at risk" was viewed as a descriptive term referring to the total educational context in which students operate, rather than a negative reflection of the students.

A great deal of information about "at-risk" students is present in the educational literature, beginning with the traditional approach of studying student dropouts (Wehlage & Rutter, 1986; Castello & Young, 1988; Natriello, Pallas, & McDill, 1986) and alienated youth (Pellicano, 1987) and moving toward the more recent emphasis on changes in policy and practice that enhance students' chances to succeed (Hendrick, MacMillan, Balow, & Hough 1989). The earlier emphasis was on studying the correlates to dropouts — to focus on social decay as both the cause of alienation and the barrier preventing school success in dealing with the dropout. Institutions may rationalize the plight of dropouts in this way: it is not the school's fault that some students come from poor homes and community environments, and lack the motivation and academic talent to succeed; the schools are unable to solve these socioeconomic determinants and are, therefore, not responsible for the fact that a sizable portion of their clients find good reasons to leave before graduation.

Presseisen (1988) described the term "at risk" as originating from a medical model in which it was used as part of the phrase "at risk of something." An example is a student at risk of dropping out of school. Another definition of a student "at risk" is one who is "in danger of failing to complete his or her education with an adequate level of skills" (Slavin & Madden, 1989). The term implies that there is a threatening condition surrounding these students, and that the condition is not necessarily inherent in the students. This perspective allows for interventions to reduce some of the threat, and thereby increase the students' chances of avoiding the condition. The author described groups often included in the "at-risk" category as ethnic minorities, male students, students of low socioeconomic status, and students suffering from various forms of stress or instability.

Presseisen further indicated that these student groups seem to encompass a number of problems related to quality and appropriateness of educational services, meaninglessness of instruction, family and community instability, and academic and school distinctions.

Richard A. McCann (1988) provided four descriptors of at-risk students, including characteristics of the individual, environmental conditions, students' ability to meet educational standards, and students' behaviors indicating their inability to assume responsible adult roles. These descriptors focus on negative behaviors and conditions. McCann asserts that the outcome of ignoring these negative variables will be a citizenry of unproductive society members.

After reading these and other authors, the R&D Cadre agreed to the following definition of at-risk students:

> "An at-risk student is one who is in danger of failing to complete his or her education with adequate academic skills, knowledge, and attitudes to function as a responsible citizen of his or her community."

For practical purposes of identifying and selecting students for this study, an at-risk student is identified as a student who failed one or more courses in the fall semester of the 1993-94 school year and was in grades 9-12 of a public high school in the Pacific region. This dependent variable was used in the selection of students for the study. A student's degree of at-riskness was related to the number of courses that student failed.

Variables Related to Students' At-Risk Status

Ekstrom, Goertz, Pollack, and Rock (1986) used the National Center for Education Statistics (NCES) High School and Beyond database to look at "Who drops out of high school and why?" They found that the two background factors most strongly related to dropping out of school are socioeconomic status (SES) and race/ethnicity. Black-Americans and Hispanics were the ethnic groups identified in this study as potential dropouts. Other factors included single-parent families, large families, and living in the South (USA) or in a large city. Academic failure was consistently related to dropping out, and students who dropped out have been shown to have experienced dissatisfaction with school and have lower self-esteem.

In an earlier study, Rumberger (1983) identified factors leading to students' decisions to drop out of school. The purpose of the study was to see how family background relates to dropping out of school for students of different ethnic groups and gender. The results showed that students from low SES status were more likely to drop out than those of high SES. Young women were highly influenced by their mother's educational level and males by their father's level of education. At the time of the study, most females left school due to pregnancy and to marry, and males left school to go to work. Family background factors, including parents' level of education and the social status of the family, were found be powerful predictors of dropping out. The author speculates that students from families with low social status may have a greater tendency to leave school to help support their families. Therefore, family background was found to be a significant factor in predicting dropping out of school.

Although these studies present a broad picture of factors related to at-risk youth, they may not address the specific population of the Pacific region. Many of the region's students would be considered ethnic minorities by U.S. Mainland standards, but are in the majority in their islands. When compared to U.S. standards, many would also be considered to be from lower income families. It should also be noted that the region's students are presently undergoing rapidly changing cultures. In an article relevant to the Pacific, Ainsley, Forman, and Sheret (1991) described a study of high school [illegible] influence students to remain in sc[illegible]ew South Wales, Australia. In addition t[illegible]ffects of socioeconomic status, gender, and being non-English first language speakers, they identified two other fac-

tors that influence students to remain in school — student achievement level and student's perception of the quality of school life. This study also recommended investigating other school-related factors such as curriculum innovations, school organization, student achievement, and students' attitude toward school.

In a study sponsored by the World Bank, Bruce Fuller investigated school factors that raise achievement in the Third World (1987). Fuller suggested that "school institutions exert a greater influence on achievement within developing countries compared to industrialized nations, after accounting for the effect of pupil background." His perspective for the review was to look at "how material ingredients are mobilized and organized within schools and classrooms." The school factors reviewed were school expenditures, specific material inputs, teacher quality, teaching practices, classroom organization, and school management. The two key issues raised were: (1) the greater influence of schools on student achievement in developing nations, and (2) how material inputs are "managed and what skills teachers draw upon to strengthen the social structure of the classroom."

For purposes of identifying factors for investigation in the R&D Cadre's study, the most informative work was Koki's study, "The Children and Youth At-Risk Effort in Hawai'i" (1987). Koki outlined academic, psychological, and social-behavioral indicators of at-risk students in Hawai'i. Hawai'i's at-risk students included those with limited English proficiency, underachievers, the intellectually limited, the economically disadvantaged, the malnourished, substance abusers, dropouts and potential dropouts, those retained for one or more years, pregnant teens or teens with children, those from unstable homes, the abused and neglected, the psychologically impaired, those who threaten or attempt suicide, juvenile delinquents, and the "silent ones" or withdrawn, alienated youth. The study reviewed a number of intervention programs aimed at students with these characteristics.

The review of the literature led to the identification of factors to be investigated in the PREL at-risk study. To account for the differences inherent in these entities, and to identify factors most associated with at-riskness in public high school students, the Cadre focused on four broad domains: the student, home, school, and community. Selection of these domains arose from a model of student performance described by Alesia Montgomery and Robert Rossi (1993) who wrote, "A student's personal, home, community, and school characteristics should not be studied in isolation — all these variables contribute to student performance, and they are strongly interactive." This model encompasses the previously reviewed research from the U.S. mainland, Hawai'i, Australia, and developing nations.

The R&D Cadre adheres to the body of literature that is premised on the assumption that although non-school-based factors contribute to the school success of students, schools can make a difference. Hendrick, MacMillan, Balow, and Hough (1989) provided a summary statement of this position. "Even though one cannot pinpoint the best intervention for a particular group of students, there are a number of general school strategies that have been shown to be successful in retaining students. Indeed, one characteristic of the literature on intervention strategies is that almost everything seems to work when enthusiastic and engaged principals and teachers become committed to a specific course of action."

The Cadre felt that research on at-risk factors identified for youth in American inner-cities may not be relevant to Pacific communities. As a result, this study sought to identify and research variables related to student success and failure which are specific to the public high schools of the U.S. affiliated Pacific region. Through this study and the R&D Cadre's identification of the factors that place Pacific public high school students at risk, Pacific communities may unite and focus on reshaping roles and partnerships between schools, homes, and communities to provide enduring systemic change to better serve all of the students.

III. Research Questions

The primary research question to be addressed was:

What are the variables within the schools, homes, and communities that relate to students failing in the public schools of the Pacific region?

A related question to be considered was: *What areas should be targeted to better serve at-risk students in these schools?*

IV. Methodology

This regional research could not have been accomplished without the PREL R&D Cadre. This Cadre of 14 Pacific educators worked in collaboration with PREL staff to design the study, coordinate and implement plans at the local level, and participate in the analysis and completion of the final report. Each Cadre member was assisted in his/her own jurisdiction by a local R&D Support Group of teachers, counselors, principals, central office staff, and education administrators. Five PREL staff were assigned to collaborate on this effort.

The design work for this study was initiated in January 1993 at the PREL R&D Cadre Seminar, during which a plan of work and data collection instruments were drafted. From February to April 1993, the instruments were piloted in all entities during PREL staff site visits. In May through June 1993, PREL staff finalized the data collection instruments. From July through August 1993, PREL staff met with R&D Cadre members either on-site or over PEACESAT teleconferences to get feedback and finalize procedures for collecting data. In September 1993, data collection was initiated by setting up sampling procedures in each entity and plans were finalized for data collection. On-site training on data collection procedures was conducted during the fall semester in all entities. These sessions were held to provide local R&D Support Group members in each entity with consistent training. Data collection began in January 1994 with student selection based on the Cadre's At-risk definition and student's academic performance in the previous semester. On-site support was provided by PREL during the spring semester to initiate data collection and to review and validate the data before submission of the data set. Data sets were submitted for data entry at a seminar in Honolulu in June 1994. Data were aggregated and entered into six databases. The R&D Cadre met in October 1994 to review preliminary analysis and to begin drafting the report. PREL staff continued the work with statistical analysis support. The R&D cadre members were consulted throughout final report development.

Six instruments were developed for data collection. The first instrument was designed to gather data from students' school records, and included information on grades, absenteeism, length of enrollment in the school, discipline, attitude, and behavior. A second instrument, a student interview protocol, was designed to gather demographic information as well as students' perspectives on the quality of instructional services and school climate at their school. A third instrument was designed for parent interviews to gather information regarding the family configuration, expectations for the student, and relationships with the school. A fourth instrument, a teacher interview protocol, focused on the teachers' credentials and their opinions about the students targeted for the study. The fifth and sixth instruments were interview protocols for principals regarding school variables and their perceptions of the at-risk issue and community leaders regarding the social context of the students' daily lives outside of school.

Data collection was a challenge in Chuuk. One major difficulty was the accessibility to school records, including long-term academic records for students in high school. This situation delayed the selection of students until records could be consolidated from a number of different sources within the school. A second challenge was the difficulty of accessing parents and non-school personnel.

In Chuuk, data were collected from 48 student records, 50 students, 48 families, 2 school principals, 47 teachers, and 13 community leaders. Equal numbers of at-risk and not at-risk students were randomly selected at each grade level from the Chuuk public high school. The data set included 25 at-risk students and 25 not at-risk students. Table 1 summarizes the number of respondents for each instrument in Chuuk State.

Table 1. Number of Respondents for Each Instrument in Chuuk State

Entity	Records	Student Interview	Parent Interview	Teacher Interview	Principal Interview	Community
Chuuk	48	50	48	47	2	13

V. Framework for Analysis

The review of the literature suggested areas of analysis for this study. The analyses were grouped according to the four contexts identified in the design of the study: the student, the home, the school, and the community. Table 2 shows the placement of student, home, and school variables analyzed within this conceptual scheme.

The student was the unit of analysis in the study. Regional data were analyzed using chi-square analysis. Whenever an independent variable could be measured in ordinal or interval scale, analysis of variance was used. In Chuuk, because the sample size was small, many of the variables could not be analyzed through these statistical methods. Thus, response frequencies for each variable were analyzed for trends indicating relationships with the at-risk status of students. Variables that appear to be educationally significant are discussed in the report.

Table 2. List of Student, Home, and School Variables

Contexts	Variables	Description of Variable
Student	1. Gender	Male/Female
	2. Language	Language spoken in the home
	3. Ethnicity	22 ethnic groups represented in the region
	4. "Foreignness"	Constructed variable including student's citizenship, ethnicity, length of stay in current residence, majority /minority ethnic group in school
	5. Previous academic performance	Number of courses failed in previous three semesters
	6. Homework	Time spent doing homework
	7. School attitude problems	As reported in school records
	8. Disciplined for attitude problems	Referred to the Office
	9. Behavioral problems	As reported in school records
	10. Disciplined for behavioral problems	Referred to the Office
	11. Absenteeism	As reported in school records
	12. Disciplined for attendance problems	Referred to the Office
	13. Comments about school made at home	Does student talk about school while at home?
	14. Emotional abuse/ neglect	Self-report of abuse, neglect and traumatic experiences
	15. Abuse of family member	Did student witness abuse of family member?
	16. Witness an accident	Did student witness an accident?
	17. Alcohol abuse	Self-report of alcohol abuse
	18. Substance abuse	Self-report of substance abuse
Home	19. Socioeconomic status	Household income computed according to enti average and including subsistence income
	20. Family configuration	Number of people in the household
	21. Quality of relationship with family	Self-report by parent about quality of relationship with student
	22. Family responsibilities	Family responsibilities which cause school absences
School	23. After school tutoring services	Do students receive school tutoring services?
	24. Language of instruction	Reported by teachers
	25. Class size	Ratio of students to teacher
	26. Teaching experience	Years of teaching experience
	27. Teachers who request training in at-risk teaching strategies	From teacher questionnaire
	28. Teachers who request more instructional materials	From teacher questionnaire

VI. Results

Variables found to be educationally significant for Chuuk State based on response frequencies are discussed in relation to the statistical results for the region.

As shown in Table 3, fifteen of the eighteen variables associated with the student context were significantly associated with at-risk students region-wide. Results in Chuuk were not consistent with these results, however, as only four of the eighteen variables appeared related to at-risk students.

Table 3. Results for Student Variables in the Region and in Chuuk State

Student Variables	Statistically Related to At-Riskness in the Region	Response Frequencies Indicate a Relationship in Chuuk
1. Gender	No	No
2. Language	No	No
3. Ethnicity	No	No
4. "Foreignness"	Yes	No
5. Previous Academic Performance	Yes	No
6. Homework (amount of time spent)	Yes	No
7. School attitude problems	Yes	Yes
8. Disciplined for School attitude problems	Yes	No
9. Behavioral problems	Yes	Yes
10. Disciplined for Behavioral problems in school	Yes	No
11. Absenteeism	Yes	Yes
12. Disciplined for attendance problems	Yes	No
13. Comments about school made at home	Yes	No
14. Emotional Abuse/Neglect	Yes	No
15. Abuse of Family member	Yes	No
16. Witness an accident	Yes	No
17. Alcohol	Yes	No
18. Substance Abuse	**	No
Divorce	No	Yes

** = Small cell sizes preclude statistical testing.

Variables found to be statistically significant in the review of the National literature, but not in the regional or the Chuuk study, were gender, language and ethnicity. In other words, although students were selected at random, gender was not significantly associated with at-risk status as defined in this study. Language also was not a significant variable, perhaps because the language of the home also was the primary language of the community at large, unlike the U.S. mainland context with English speaking majority in communities where the research was conducted. A similar explanation may be made of the lack of significance for ethnicity.

Response frequencies obtained from Chuuk on these variables are presented in Table 3A. Similar numbers of females and males fell into at-risk and not at-risk categories. It is interesting to note that, although 11 at-risk students and 10 not at-risk students identified themselves as ethnic minorities, only four students said that they spoke a language other than Chuukese at home.

Table 3A. Frequency Table for Student Variables 1-3

Student Variables	At-Risk	Not At-Risk
1. Gender	Female=14 Male=11 Total=25	Female=12 Male=13 Total=25
2. Language spoken at home (Native = Chuukese)	Native=24 English=0 Both=0 Others=1 Total=25	Native=21 English=0 Both=1 Others=3 Total=25
3. Ethnicity Ethnic minority in school (yes or no)	Yes=11 No=13 Total=24	Yes=10 No=14 Total=24

Because an analysis of the ethnicity variable did not yield significant results, it was decided that, in view of immigration patterns in the region, a construct called "foreignness" should be investigated. Student "foreignness" was measured by citizenship, ethnicity, and whether the student had lived in the entity of current residence since birth, and the student's status as an ethnic minority or majority in school.

The relationship between "foreignness" and at-riskness was significant in the region, and showed that the "more foreign" a student, the less likely the student was to be at risk. There are several possible explanations for this finding. Moving to a new home may entail the search for a better life and, therefore, greater motivation to excel in school as a means of reaching success in the new location. Immigrants may also have different cultural values regarding education or different prior schooling experiences.

In Chuuk however, the construct called "foreignness" did not have a relationship with students at risk. Table 3B shows that the construct "foreignness" had no variance in the sample. All students, both at-risk and not at-risk, were characterized as "least foreign" on the scale. This might be explained by the fact that there is very limited immigration in Chuuk.

Table 3B. Frequency Table for Student Variable 4

Student Variables	At-Risk	Not At-Risk
4. "Foreignness":	One=22	One=24
	Two=0	Two=0
1= least "foreign" and 5= most "foreign"	Three=0	Three=0
	Four=0	Four=0
	Five=0	Five=0
	Total=22	Total=24

One finding in the regional data consistent with the National research is that a student's previous academic performance is a highly significant predictor of at-risk status. In Chuuk State the data did not show a strong relationship for this variable although, as Table 3C indicates, five students in the at-risk sample had failed one or more courses and no student in the not at-risk group had previous failures.

Table 3C. Frequency Table for Student Variable 5

Student Variables	At-Risk	Not At-Risk
5. Previous Academic Performance (Number of courses	Zero=19	Zero=22
failed in previous three semesters)	One=1	One=0
	Two=3	Two=0
	Three=0	Three=0
	Four=1	Four=0
	Five=0	Five=0
	Total=24	Total=22

Another regional finding consistent with National research was that student perceptions about school as indicated by time spent doing homework, attitude and behavioral problems in school, and student absenteeism were significantly related to the at-risk status of students. The length of time spent doing homework was related to at-risk status and was used as an indication of a student's perception of the importance of the work and willingness to commit time to the assignments. Disciplinary action for attendance problems in the past, as shown in the school records, also was significantly associated with at-risk status. In addition, at-risk students had more reports of attitude and behavioral problems and instances of being disciplined for these problems at school.

The results for Chuuk State, however, were not always consistent with the findings in the region. Time spent doing homework does not appear to be strongly related to at-risk student status in Chuuk. However, as indicated in Table 3D, there is a trend toward "always completing" homework by the not at-risk students.

Table 3D. Frequency Table for Student Variable 6

Student Variables	At-Risk	Not At-Risk
6. Homework (How often student does homework)	One=9	One=13
	Two=16	Two=12
1=always; 2=sometimes; 3=never	Three=0	Three=0
	Total=25	Total=25

School attitude and behavioral problem variables in Chuuk were consistent with the regional findings and appear to be related to students' at-risk status as summarized in Table 3E. Although school records (variables 7 and 9) indicated a higher incidence of both school attitude and behavioral problems for at-risk students, variables 8 and 10 indicated that no students from either group were referred to the office for these problems. This may be attributed to record keeping inaccuracies, or school policies on disciplinary action.

Table 3E. Frequency Table for Student Variables 7-10

Student Variables	At-Risk	Not At-Risk
7. School attitude problems (according to school records)	Yes=11	Yes=1
	No=13	No=23
	Total=24	Total=24
8. Disciplined for attitude problems (referred to the office)	Yes=0	Yes=0
	No=24	No=24
	Total=24	Total=24
9. Behavioral problems (according to school records)	Yes=10	Yes=1
	No =14	No =23
	Total=24	Total=24
10. Disciplined for behavioral problems (referred to the office)	Yes=0	Yes=0
	No =24	No =24
	Total=24	Total=24

Absenteeism, as indicated in school records, appears to be clearly related to student at-risk status in Chuuk. However, no such relationships were obtained for referral to the office for attendance problems. Again, the records in Chuuk seem to indicate that while the problem existed and was noted in school records, office referrals for that problem occurred less frequently. Attendance data are presented in Table 3F.

Table 3F. Frequency Table for Student Variables 11, 12

Student Variables	At-Risk	Not At-Risk
11. Absenteeism (school records indicate an attendance problem)	Yes=19 No =5 Total=24	Yes=8 No =16 Total=24
12. Disciplined for attendance problems (referred to the office for attendance problem)	Yes=7 No =17 Total=24	Yes=6 No =18 Total=24

Another group of region-wide student variables investigated focused on the student's home and family. Larger numbers of not at-risk students in the region made comments about school at home to their parents compared to at-risk students. This analysis did not focus on the type of comments (positive or negative). Not at-risk students simply talked more about school when they were at home.

However, In Chuuk, no strong relationship was obtained for comments made about school in the homes. As indicated in Table 3G, only a few more not at-risk students made comments about school at home than their at-risk peers.

Table 3G. Frequency Table for Student Variable 13

Student Variables	At-Risk	Not At-Risk
13. Comments about school made at home	Yes=10 No =13 Total=23	Yes=14 No =10 Total=24

Personal problems and emotional stress were also found to be significantly related to the at-risk status of a student in the region, as in studies conducted elsewhere. Significantly larger numbers of at-risk students experienced emotional abuse and neglect and lived with physical abuse by a close relative. They also had witnessed more accidents and reported significantly more instances of alcohol and substance abuse than their not at-risk peers.

In Chuuk State, none of the personal or emotional variables seemed to have a clear relationship with the at-risk students. However, the variable "divorce", not included as a variable in the regional report, appears to be an indicator of at-risk status in Chuuk. A larger number of at-risk students reported to have experienced divorce in their families as compared with not at-risk students. Table 3H provides frequency data for these variables.

Table 3H. Frequency Table for Student Variables 14-18, and Divorce

Student Variables	At-Risk	Not At-Risk
14. Emotional abuse/neglect	Yes=3 No =21 Total=24	Yes=0 No =24 Total=24
15. Abuse of family member	Yes=1 No =23 Total=24	Yes=0 No =24 Total=24
16. Witness an accident	Yes=4 No =21 Total=25	Yes=5 No =20 Total=25
17. Alcohol abuse	Yes=1 No =24 Total=25	Yes=1 No =24 Total=25
18. Substance abuse	Yes=0 No =25 Total=25	Yes=0 No =25 Total=25
Divorce of parents or self	Yes=6 No =18 Total=24	Yes=1 No =23 Total=24

The second set of analyses focused on data from the home context. Table 4 shows the results obtained for the variables associated with the home context in the region and in Chuuk. Except for the socioeconomic status variable, the results for Chuuk were inconsistent with regional findings.

Table 4. Results for Home Variables in the Region and in Chuuk State

Home Variables	Related to At-Riskness in the Region	Response Frequencies Indicate a Relationship in Chuuk
19. Socioeconomic status	No	No
20. Family configuration	Yes	No
21. Quality of relationship with family	**	Yes
22. Family responsibilities	Yes	No

** = Small cell sizes preclude statistical testing.

Because of economic diversity among entities, socioeconomic status was investigated two different ways: cash income in a household and a combination of cash and subsistence income. Both of these income measures were equated across all entities using criteria agreed upon by the R&D Cadre regarding average income in each of the entities. Both analyses showed that family income as an indicator of a student's socioeconomic status seemed to be unrelated to a student's at-risk status in the region and in Chuuk.

Family configuration in the region was significantly related to at-riskness. More at-risk students lived in large households of 10 or more while their not at-risk counterparts lived in smaller family units. In Chuuk however, household size did not seem to have a significant relationship with a student's at-risk status. Perhaps the extended family concept, the clan system, or traditional customs have some influence on the findings in this variable. As Table 4A indicates, the overwhelming majority of both at-risk and not at-risk students in Chuuk came from large families. A total of 21 students reported living in households of six or more members, and 24 students reported living in households of 10 or more.

Table 4A. Frequency Table for Home Variables 19, 20

Home Variables	At-Risk	Not At-Risk
19. Socioeconomic status	Very high=4 High=6 Average=4 Low=8 Very low=2 Total=24	Very high=7 High=6 Average=4 Low=5 Very low=2 Total=24
20. Family configuration (number of people living in the household) 1-5 people = One 6-10 people = Two over 10 people = Three	One=1 Two=9 Three=13 Total=23	One=0 Two=12 Three=11 Total=23

Family problems were analyzed using the reported quality of the relationship between parents and the student. Poor quality of relationship with parents appeared to be associated with at-risk students in the region and in Chuuk. In addition, significantly more at-risk students in the region had family responsibilities which caused them to be absent from school. However, this was not the case in Chuuk where, as reported in Table 4B, very few students reported missing school because of family obligations.

Table 4B. Frequency Table for Home Variables 21, 22

Home Variables	At-Risk	Not At-Risk
21. Quality of relationship with family	Good=20 Fair=4 Poor=0 Total=24	Good=25 Fair=0 Poor=0 Total=25
22. Family responsibilities which cause absence from school	Yes=2 No=23 Total=25	Yes=1 No=24 Total=25

The third set of analyses focused on data from the school context. Table 5 shows the results obtained for school variables in the region and in Chuuk. Except for the language of instruction and class size variables, the results for Chuuk were again inconsistent with regional findings.

Table 5. Results for School Variables in the Region and in Chuuk State

School Variables	Related to At-Riskness in the Region	Response Frequencies Indicate a Relationship in Chuuk
23. After school tutoring services	No	Yes
24. Language of Instruction	No	No
25. Class size (student teacher ratio)	Yes	Yes
26. Teaching Experience	Yes	No
27. Teachers who request training in at-risk teaching strategies	Yes	No
28. Teachers who request more instructional materials	Yes	No

School tutoring services and the language of instruction were not significantly related to at-riskness in the region. Similar results were obtained for language of instruction in Chuuk where almost all of the students reported receiving instruction in Chuukese. As Table 5A indicates, however, more not at-risk students seem to take advantage of after school tutoring services than their at-risk peers.

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Table 5A. Frequency Table for School Variables 23, 24

School Variables	At-Risk	Not At-Risk
23. After school tutoring Services	Yes=14 No=10 Total=24	Yes=19 No=5 Total=24
24. Language of Instruction Native = Chuukese	English=3 Native=21 Total=24	English=2 Native=22 Total=24

Class size and teachers' years of teaching experience were significantly related to at-riskness in the region. Results indicated that lower student/teacher ratios are actually associated with at-risk students, with relatively more at-risk students in smaller classes. These results may be attributed to grouping practices for at-risk students such as pull-out programs, and remediation or special education classes. However, there are more of both at-risk and non at-risk students in larger classes. Teachers' years of teaching experience yielded more predictable results. More at-risk students were enrolled in classes taught by teachers with less than 15 years experience.

In Chuuk, the data on class size is consistent with the regional findings with relatively more at-risk students in smaller classes and both at-risk and not at-risk students in larger classes of 21-30 students. However, as the responses in Table 5B indicate, years of teaching experience did not seem to be significant in Chuuk where the teachers' years of experience were similar for both at-risk and not at-risk students.

Table 5B. Frequency Table for School Variables 25, 26

School Variables	At-Risk	Not At-Risk
25. Class size or Student-Teacher Ratio 1-10 = one 11-15 = two 16-20 = three 21-30 = four 31 or over = five	one=0 two=4 three=2 four=12 five=6 Total=24	one=0 two=1 three=0 four=17 five=6 Total=24
26. Teacher's years of experience 1-15 years = one Over 16 years = two	one=14 two=10 Total=24	one=15 two=9 Total=24

Also related to students' at-risk status in the region was the number of teachers of at-risk students who responded that their effectiveness at teaching these students would be improved if they had access to more instructional materials and more staff development opportunities. The data from Chuuk, however, did not appear to yield any particular relationship for teachers who requested training or instructional materials. Table 5C illustrates the similarity in responses for both at-risk and not at-risk teachers.

Table 5C. Frequency Table for School Variables 27, 28

School Variables	At-Risk	Not At-Risk
27. Do teachers request training in at-risk teaching	Yes=14 No=10 Total=24	Yes=12 No =12 Total=24
28. Do teachers request more instructional materials?	Yes=23 No=1 Total=24	Yes=22 No=2 Total=24

The fourth set of analyses focused on data describing the community context. The following results show a qualitative content analysis of open-ended questions asked of all teachers, parents, and at-risk and not at-risk students in Chuuk regarding their perceptions of variables contributing to success and failure in school. Responses reported in this report were provided by a clear majority of respondents and are listed from most to least frequent. Various other responses were tallied, but were much less common than those reported here.

Students

When asked what causes them to do poorly in school, students in Chuuk said:

- Poor study habits.
- Poor attitude toward school.
- Illness, too many absences.
- Inexperienced and unprepared teachers.
- Not enough help at school.

When asked what would help them do better in school, students said:

- Applying more effort to school.
- Improved attendance.
- Asking questions, seeking help from teachers.
- Improved teacher attendance.
- Better instruction.

Students described the best teachers as those who:

- Are prepared and deliver clear instruction.
- Are consistently on time for work.
- Are willing to offer extra help.
- Develop positive teacher-student relationships.

Students described the worst teachers as those who:

- Are often or consistently absent.
- Are unprepared and unable to explain the lessons clearly.
- Display negative attitudes toward the students—are mean or lazy.

Parents

When parents were asked what will help students succeed in school, they said:

- Applying more effort to their school work.
- Improved student and teacher attendance.
- Providing student incentives for success.
- Parents and the school working together.
- Support, guidance, and encouragement from family, peers, school staff and counselors.
- Improved school environment, library, instructional materials, and curriculum.

Parents said the causes of student success in school performance are:

- Good effort, study habits, and attitude.
- Good attendance by the student.
- Family and teacher support.

Parents said the causes of student difficulties in school are the result of:

- Carelessness, and poor attitude and study habits.
- Poor attendance.
- Illness or shyness, family obligations, financial hardship.
- Inexperienced teachers and teacher absenteeism.

Teachers

Teachers said that causes of student success are:

- Good study habits, skills, and attitude.
- Good attendance and participation.
- High motivation.

Teachers said that causes of student failure are:

- High absenteeism.
- Poor study habits and skills.
- Low motivation and poor attitudes.
- Family problems.

The data were consistent in pointing to effort on the part of students as a primary variable in student success. Another finding focuses on the need for increased communication and support for the students from the school and the home. Problems symptomatic of poor school performance seem to be related to absenteeism, and poor work habits and attitudes. Student complaints point to teachers' absenteeism as a primary problem, as well as lack of preparedness and/or skill in teaching their subject areas.

These results indicate the critical need to pay attention to the affective and academic components of the curriculum. Habits and attitudes in learning are as important as skill and knowledge development. The home, school, and community each play an integral role in conveying positive messages about school, as well as providing the support the student needs to succeed.

Summary of Results for Chuuk

The overall results of the study indicate that a number of students, home and school characteristics seem to be related to student at-riskness.

Student variables which had cell sizes too small to be analyzed through statistical methods, but appeared to be significant, were absenteeism, school attitude problems, behavioral problems, and divorce. Home and school variables that appeared related to at-riskness were the quality of the students' relationship with his/her family and class size.

In the data collection phase, the lack of cumulative records for students was noted in Chuuk and throughout the region. An analysis of open-ended questions asked of students, parents, and teachers points to the need to address issues of affective as well as academic issues of schooling, teacher and student absenteeism, teacher training and the quality of instruction, and the critical role of interactions between students, teachers, parents, and the community.

The results of this study support some of the general findings of the research conducted elsewhere. Unique to the Pacific region may be some of the cultural and family characteristics that blend the family unit with the community, increasing the influence of the quality of family and community life on education. In addition, gender, ethnicity, language, and socioeconomic status were not found to be significantly related to at-riskness. These variables were investigated

in research on the U.S. mainland with different definitions of gender role expectations, ethnic minorities, languages other than English in English-speaking settings, and SES in a commercial, cash-dependent economy. In the Pacific, these variables, which would define minority status in other contexts, do not indicate the same reality for Pacific islanders.

VII. Recommendations

After analyzing the data, the R&D Cadre conducted a second review of the literature describing programs and initiatives related to issues of at-risk status in Pacific Schools. (A list of the studies and papers reviewed are provided in the regional report's appendix.) These articles were the basis of the Cadre's discussions and led to regional recommendations associated with student, home, and school variables.

See the regional report for a full discussion of regional recommendations. The recommendations that are most pertinent to Chuuk are:

Recommendations Regarding Findings on Student Variable

1. Address the absenteeism by students and teachers. Absenteeism appeared to be strongly related to at-risk students in Chuuk State and students, teachers, and parents all cited attendance as a key factor in student success and failure.
2. Schools, communities, and parents should work together to give consistent messages about the value of education and the value of students as contributing members of the community and family. Respect for self and others, support for daily school attendance, and participation in school are general views which can be reinforced by all members of a community who come in contact with students. For these partners to support these views, schools need to engage in self examination and improvement efforts to ensure their effectiveness as institutions of relevant learning for the students and community.
3. Offer academic, career and college counseling, substance abuse prevention and counseling, and personal adjustment/life-skills support to all students. These services are critical because students, teachers, and parents in Chuuk cited poor attitudes and personal problems as causal factors in failure, and attitude and behavioral problems appeared to be related to at-risk status.
4. Maintain and use student records to support students' learning, and to provide a long-term view of a student's academic, physical, emotional, or social experiences. Records can also be used to provide information about any awards or special recognition as well as needs for special support. The lack of these records creates a deficit of critical information that prevents the development of the most effective educational program for students who are experiencing difficulties at school as well as students who are already successful.

Recommendations Regarding Findings on School Variables

1. Focus on improving the quality of instruction provided by schools and teachers, and make a commitment to improving conditions that promote learning. Demonstrate both the immediate and long-term benefits of education to students by making teaching and learning interesting, engaging, relevant, and effective. Teacher preparedness, timeliness, and willingness to offer additional lessons or support were seen as teacher

qualities important to student success by students and parents in Chuuk.

2. Acknowledge and increase teacher professionalism through staff development. Positive regard, caring, and commitment to the school and community must be modeled by teachers, administrators, parents, and community members in order for students to see the long-term value of their education and the role that education plays in Pacific island cultures and communities. Students must have the opportunity to work with teachers, administrators, and adults in the community who conduct themselves as role models.

Recommendations Regarding Findings on Home Variables

1. Increase parent and family involvement. One interesting finding was that not at-risk students discuss school related issues in the home more than at-risk students. There is a need to influence and change the perception and attitude of students and parents that education is the school's responsibility alone. Support and outreach programs which involve families in the education of their children should be a focus for educational programming. School-family-community partnerships may be formed to address the critical areas identified by this research.
2. Families, educators, and communities must re-examine their roles and come together to view the learning and success of their students as a shared responsibility of the whole community. Learning is not limited to the hours spent in school. Learning extends throughout the day and in many different settings. It has often been said, "It takes a whole village to raise a child." A student's self-esteem and motivation to learn do not begin and end at the door of the school.

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PACIFIC REGION EDUCATIONAL LABORATORY
828 Fort Street Mall • Suite 500
Honolulu, Hawai'i 96813-4321
(808) 533-6000 • FAX (808) 533-7599
e-mail: askprel@prel.hawaii.edu
Institutional Services
828 Fort Street Mall • Suite 500
Honolulu, Hawai'i 96813-4321
(808) 533-6000 • FAX (808) 533-7599
e-mail: askprel@prel.hawaii.edu
Eastern Pacific Service Center
828 Fort Street Mall • Suite 500
Honolulu, Hawai'i 96813-4321
(808) 533-6000 • FAX (808) 533-7599
e-mail: askprel@prel.hawaii.edu
Western Pacific Service Center
Suite 203, Bank of Hawai'i Building
Marina Heights Business Park
PPP 145 • Box 10000
Puerto Rico, Saipan MP 96950
Phone: (670) 323-6000 ext 2
FAX: (670) 323-7336
e-mail: prelwest@prel.hawaii.edu

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